Applicant : David H. Kil
Serial No. : 10/662,765
Filed : September 15, 2003
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Attorney's Docket No.: 14255-035001 / ARC01-
20100.00

REMARKS

Claims 1 to 35 are pending in this application. Claims 19 to 29 have been withdrawn by the Office as directed to non-elected subject matter. Applicants propose to amend claim 1 to recite extracting two or more features from each pixel from a region of interest (ROI) and two or more features from each pixel from a non-ROI, and to recite outputting analysis results to a user, output device or a computer database. Support for the amendments can be found throughout the application. No new matter has been added. Furthermore, the proposed claim amendments would raise no new issues and require no additional searching by the Examiner, and instead would place the claims into condition for allowance or at least put the claims into better condition for appeal.

35 USC §101

Claims 1, 2, 4 to 6, 8, 9, 11, 13 to 15, and 17, were rejected as allegedly directed to non-statutory subject matter. Applicants do not agree that the present rejection is proper and maintain that the originally-filed claims are directed to statutory subject matter. However, in the interest of moving the present application toward allowance, applicant proposes to amend claim 1 to recite outputting analysis results to a user, output device or a computer database, as suggested by the Office. Applicant respectfully submits that claims so amended result in a "concrete, tangible and useful result" and are directed to statutory subject matter under 35 U.S.C. §101. Applicant therefore requests that the amendment be entered and that the present rejection be reconsidered and withdrawn.

35 U.S.C. §102(e)

Claims 1, 2, 4 to 6, 8, 9, 11, 13 to 15, and 17 have been rejected as allegedly anticipated by Akselrod (US Patent No. 6,858,007). Assuming, but not conceding, that Akselrod is prior art citable against the present claims, applicant again respectfully traverses this rejection.

Applicant in the previous Amendment in Reply to Action filed on January 3, 2007, explained that Akselrod does not anticipate the presently claimed methods because, *inter alia*, it fails to teach or suggest a step of performing feature ranking based on performance as described

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in applicants' specification. Applicant maintains those arguments and incorporates them herein by reference. In the interest of moving the present application toward allowance, applicant proposes to amend claim 1 to recite extracting two or more features from each pixel from a region of interest (ROI) and two or more features from each pixel from a non-ROI, to further clarify that the step of "ranking the extracted features based on feature performance for successful detection of a selected ROI at a pixel level of processing" involves ranking multiple features (e.g., red (R), green (G), blue (B), hue (H), saturation (S), intensity or value (V), gray intensity after RGB-to-gray conversion and histogram equalization (GI), red/green (RG), red/blue (RB), green/blue (GB)) extracted from an individual pixel. As noted by the Office (see the Office Action at page 9, lines 9 to 12), Akselrod involves analyzing clusters of pixels. This is made clear by Axelrod itself, which states, for example: and column 14, lines 48):

> The entire process can be viewed as clustering. Since the pixels from each tissue form a cluster in the parameter space, the curve $K(i,j)=t$ can be viewed as a decision curve separating the clusters. (column 13, lines 43 to 48)

> Any knowledge about the shapes of the two clusters may be used to optimize the weights, in order to obtain a better decision curve. (column 14, lines 23 to 25)

Akselrod fails to teach, or even suggest, performing feature ranking based on performance as described in applicants' specification. Thus, Akselrod does not anticipate pending claim 1 because it does not teach each and every step of the recited method.

Claims 2, 4 to 6, 8, 9, 11, 13 to 15, and 17, all depend from claim 1, and are thus patentable for at least the reasons discussed above. In addition, Akselrod does not anticipate these dependent claims because it fails to teach, or even suggest, e.g., performing image analysis using additional levels of processing, e.g., second and third levels of processing, such as subimage processing and/or object processing.

For the reasons above, applicant requests that the amendment be entered and that the present rejection be reconsidered and withdrawn.

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35 U.S.C. §103

Claims 3, 7, 10, 12, 16, and 18, were rejected as allegedly obvious over Akselrod in view of Levenson et al. (U.S. Patent No. 6,750,964). Assuming, but not conceding, that Levenson is prior art citable against the present claims, applicant again respectfully traverses this rejection.

The deficiencies of Akselrod are discussed above. Levenson does not remedy those deficiencies. Levenson describes, *inter alia*, a method for identifying target features from one or more images of an unknown sample. The method entails obtaining reference image cubes using a spectral illuminator, processing reference data and defining spectral weighting functions, illuminating the sample with the spectral weighting function and recording images, and processing images and identifying regions of interest (see, e.g., Levenson at col. 3, lines 37 to 67). Levenson, like Akselrod, fails to teach or suggest performing feature ranking as described in applicants' specification. Thus, even if Levenson were combined with the disclosure of Akselrod, the presently claimed methods would not have been obtained, because not all steps of the presently claimed methods are taught or suggested in these references.

Further, with respect to claims 7, 10, 12, 16, and 18, Levensen, like Akselrod, fails to teach, or even suggest, e.g., performing image analysis using additional levels of processing, e.g., second and third levels of processing, such as subimage processing and/or object processing.

Thus, the Office has failed to establish a *prima facie* case of obviousness against claims 3, 7, 10, 12, 16, and 18, because, *inter alia*, these publications do not teach or suggest all steps recited in these claims. Neither Akselrod nor Levenson, individually or in combination, renders the present claims obvious. Accordingly, applicant requests that the amendment be entered and that the present rejection be reconsidered and withdrawn.

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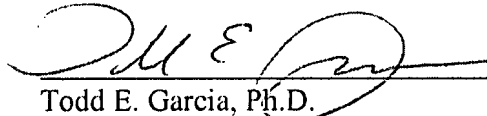Filed : September 15, 2003
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CONCLUSION

Applicant requests that the proposed amendments be entered and that all claims be allowed. Enclosed is a Petition for a Two-Month Extension of Time. The fee in the amount of $225.00 for the extension of time is being paid concurrently herewith on the Electronic Filing System (EFS) by way of Deposit Account authorization. It is understood that this perfects the application and no additional papers or filing fees are required. However, please apply any other charges or credits to deposit account 06-1050, referencing Attorney Docket No. 14255-035001.

Respectfully submitted,

Date: 8/30/07

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